

REMARKS

Claim 1-16 and 18-33 are now in the application. Claim 1-16, 18, 32 and 33 are directed to the elected invention and claims 1-4, 6-9, 11-18, 32 and 33 are drawn to the elected species. Claims 19-31 are directed to non-elected invention and may be cancelled by the Examiner upon the allowance of the claims directed to the elected invention.

Claim 1 has been amended to change " $-Z-R-CR^2=CR^2R^3$ " to read " $-Z-R-CR^1=CR^2R^3$ " for purposes of clarity and not to limit the scope of claim 1.

Support for new claim 32 is found on page 6, line 33 to page 7, line 2 of the instant specification. Support for new claim 33 is found on page 9, lines 2-4 of the instant specification.

Claims 1-4, 6-9 and 11-18 were rejected under 35 U.S.C. 103 (a) as being unpatentable over European '036 in view of U.S. Patent No. 5,112,881 to Mandal, et al., U.S. Patent No. 4,638,018 to Bauduin, et al., U.S. Patent No. 4,273,851 to Muzyczko, et al., and/or U.S. Patent No. 3,867,318 to Nishikubo, et al. The cited references do not render obvious the above claims since, among other things, none of the references provide any suggestion or motivation to combine their teachings to arrive at the present invention.

The vinyl polymer of the present invention, which has a group of the general formula (1) at a molecular chain terminus, can provide a thermoplastic elastomer through exposure to light or heat.

The group of the general formula (1) undergoes dimerization on exposure to light or heat (see page 48, line 25 of the specification). As a result, the vinyl polymer of the present invention changes into a thermoplastic elastomer, which shows higher strength and elongation than the pre-dimerization polymer, and which shows rubber-like elasticity (See Examples 3 and 4 of the instant specification).

Concerning the polymer suggested in EP'036 (Kusakabe), however, its terminal acryloyl group undergoes polymerization, instead of dimerization. Therefore, it changes into a cured product that is more rigid than the pre-dimerization polymer. In general, thermoplastic elastomer cannot be obtained from the polymer of EP'036 (See page 3, lines 7-18 of the instant

specification). The cured polymer of the reference differs significantly from the polymer of the present invention.

The effect of the present invention (the claimed vinyl polymer can change into a thermoplastic elastomer) cannot be expected from EP'036 and the other cited documents.

The secondary references (i.e. Mandal, Bauduin, Muzyczko and Nishikubo) do not overcome the above discussed deficiencies of EP'036 with respect to rendering obvious the present invention.

Mandal, Bauduin, Muzyczko and Nishikubo state that the cinnamoyl group has photopolymerizability, but they do not disclose that the cinnamoyl group is preferred to (meth)acryloyl group. MPEP 2143.01 says, "The prior art must suggest the desirability of the claimed invention." Thus, the above 4 references do not provide any motivation or suggestion to use the alkenyl groups represented by the general formula (1), including a cinnamoyl group, in lieu of a (meth)acryloyl group.

As further evidence of the patentability of the above claims, see the attached "Declaration Under Rule 132."

In the Declaration, it was shown that the cured product from the cinnamate-terminated polyacrylate according to the present invention has much greater elongation than that from the acryloyl-terminated polyacrylate as disclosed in EP 0 789 036, while the former maintains breaking force at the same level as the latter.

This greater elongation constitutes a preferred property of the cured product from the present invention over that of EP 0 789 036.

The Declaration provides evidence that the properties of the polymer of the above claim would not be equivalent to the polymer with other known photo curable alkenyl group.

Therefore, the cited references do not provide any motivations or suggestions to combine the teachings of the references.

Consequently, the present invention is not obvious over EP 0789036 in view of Mandal, Bauduin, Muzyczko and/or Nishikubo.

The mere fact that cited art may be modified in the manner suggested by the Examiner does not make this modification obvious, unless the cited art suggest the desirability of the modification. No such suggestion appears in the cited art in this matter. The Examiner's attention is kindly directed to *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002), *In re Dembiczak et al.* 50 USPQ2d. 1614 (Fed. Cir. 1999), *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984), *In re Laskowski*, 10 USPQ2d. 1397 (Fed. Cir. 1989) and *In re Fritch*, 23, USPQ2d. 1780 (Fed. Cir. 1992).

In *Dembiczak et al.*, supra, the Court at 1617 stated: "Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. See, e.g., *C.R. Bard, Inc., v. M3 Sys., Inc.*, 157 F.3d. 1340, 1352, 48 USPQ2d. 1225, 1232 (Fed. Cir. 1998) (describing 'teaching or suggestion motivation [to combine]' as in 'essential evidentiary component of an obviousness holding'), *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d. 1453, 1459 (Fed. Cir. 1998) ('the Board must identify specifically...the reasons one of ordinary skill in the art would have been motivated to select the references and combine them');..."

Also, the cited art lacks the necessary direction or incentive to those of ordinary skill in the art to render a rejection under 35 USC 103 sustainable. The cited art fails to provide the degree of predictability of success of achieving the properties attainable by the present invention needed to sustain a rejection under 35 USC 103. See *Diversitech Corp. v. Century Steps, Inc.* 7 USPQ2d 1315 (Fed. Cir. 1988), *In re Mercier*, 185 USPQ 774 (CCPA 1975) and *In re Naylor*, 152 USPQ 106 (CCPA 1966).

Moreover, the properties of the subject matter and improvements which are inherent in the claimed subject matter and disclosed in the specification are to be considered when evaluating the question of obviousness under 35 USC 103. See *Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 USPQ2d. 1923 (Fed. Cir. 1990), *In re Antonie*, 195, USPQ 6 (CCPA 1977), *In re Estes*, 164 USPQ (CCPA 1970), and *In re Papesch*, 137 USPQ 43 (CCPA 1963).

No property can be ignored in determining patentability and comparing the claimed invention to the cited art. Along these lines, see *In re Papesch*, supra, *In re Burt et al.*, 148 USPQ

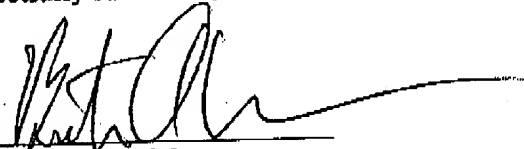
548 (CCPA 1966), *In re Ward*, 141 USPQ 227 (CCPA 1964), and *In re Cescon*, 177 USPQ 264 (CCPA 1973).

The rejection of the claims is in the nature of "ought to be tried" which is an impermissible standard under 35 U.S.C. 103 (see *Jones v. Hardy*, 220 U.S.P.Q. 1021 [CAFC, 1984]).

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Dated: 7-27-04

Respectfully submitted,

By 
Burton A. Amernick
Registration No.: 24,852
CONNOLLY BOVE LODGE & HUTZ LLP
1990 M Street, N.W., Suite 800
Washington, DC 20036-3425
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant